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ABSTRACT

Fifty students from intermediate level learning disabilities classrooms were administered the Torrance Tests of Creative Thinking as pretests and posttests to measure the effectiveness of creativity instruction on the creative written expression of the subjects. For 14 weeks the Purdue Creative Thinking Program was used to stimulate the learning disabled experimental group's creative thinking. The program features audiotapes and printed exercises designed to foster divergent thinking in the area of verbal and figural fluency, flexibility, and originality. Ss in the learning disabled experimental group made significantly greater scores than a control group on the creativity variables of the verbal subtests of the Torrance Tests of Creative Thinking. (Author/CL)

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Effects of Creativity Instruction on Learning Disabled Students' Creative Written Expression

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Running head: CREATIVE WRITTEN EXPRESSION

Abstract

Fifty students from intermediate level learning disabilities classrooms served as subjects. The Torrance Tests of Creative Thinking were used as pretests and posttests to measure the effective of creativity instruction on the creative written expression of the subjects. For 14 weeks the Purdue Creative Thinking Program was used to stimulate the learning disabled experimental group's creative thinking. Subjects in the learning disabled experimental group made significantly greater scores than a control group on the creativity variables on the verbal subtests of the Torrance Tests of Creative Thinking.

Effects of Creativity Instruction on Learning Disabled Students Creative Written Expression

Language disorders have for many years been recognized as being characteristic of the learning disabled population (Hallahan & Kauffman 1976; Johnson & MyKlebust, 1967). Written expression is one of the highest forms of language and essentially the last to be learned (Johnson & MyKlebust, 1967). The number of instructional programs developed to train written expression are limited. This study utilized the Purdue Creative Thinking Program (Feldhusen, Treffinger, & Bahlke, 1970). This instructional program was developed to train creativity in written expression. The major components of creative thinking are fluency, flexibility, and originality. These components are important in training creative written expression skills.

The purpose of this study was to examine the effects of instruction on the learning disabled (LD) students creative written expression. The dependent measure was the students' scores on the Torrance Tests of Creative Thinking (Torrance, 1974).

Method

Subjects

A total 50 students (27 boys, 23 girls) who could read at least at the 3.0 grade level participated. Their reading ability was ascertained using the Reading Comprehension and Word

Recognition subtests of the Peabody Individual Achievement Test (Dunn & Markwardt, 1970). The 50 subjects (11 to 12 years old) had been formally diagnosed by an educational specialist as learning disabled. They were randomly assigned to an experimental and control group. All of them were enrolled in intermediate-level self contained, LD classrooms. There were 25 subjects in the LD experimental group (15 boys, 10 girls) and 25 subjects (12 boys, 13 girls) in the LD control group.

Instructional Program

The Purdue Creative Thinking Program was used as the independent treatment variable. This program consists of 28 audio tapes and printed exercises designed to foster divergent thinking abilities in the area of verbal and figural fluency, flexibility, and originality. Each component consists of three parts: (a) a 3- to 4-minute segment designed to teach a principle of improving creative thinking, (b) a 10- to 12-minute long story about a famous American pioneer, and (c) three or four exercises related to the content of the story. This program has been widely evaluated, with generally favorable results with both normal and gifted elementary school students (Torrance 1972. Feldhusen, Clinkenberd, & Treffinger, 1984).

Procedure

Before instruction with the creativity training program began, the Torrance Tests of Creative Thinking, verbal booklet, Form A,

were administered to all subjects. The following subtests were used: Just Suppose, Product Improvement, and Unusual Uses. These subtests measure the creativity variables of fluency, flexibility and originality. The tests were administered using the standard directions described by Torrance (1974). Ten minutes of working time was provided for each subtest except Just Suppose, for which 5 minutes was given to complete the test.

Reliability of the Torrance Tests on Creating Thinking has been established (Torrance, 1974). The mean reliability coefficient for the verbal tests are as follows: fluency, .99; flexibility, .95; originality, .91. The Torrance Tests of Creative Thinking have been found to have short and long range validity (see Torrance, 1974).

The Purdue Creative Thinking Program was administered for two 45 minute lessons per week for 14 weeks. Within the week after instruction ended, the Torrance Tests of Creative Thinking verbal booklet, Form B, were administered to measure the effects divergent training had on the language behavior of students.

Analysis of Data

Analysis of covariance procedures were applied. The posttest Torrance Tests of Creative Thinking scores were used as the dependent variables, and Torrance Tests of Creative Thinking pretest scores were used as covariates. The probability level was

set at .05 for all tests of differences between the two groups. Separate analyses were conducted for the six subscores from the Torrance Tests of Creative Thinking: verbal fluency, verbal flexibility, and verbal originality scores.

Analysis of verbal fluency scores revealed that the LD experimental group's adjusted mean was significantly greater ($p < .001$) than that of the control group. For verbal flexibility the LD experimental group's adjusted posttest mean was again significantly greater ($p < .05$) than the mean of the control group. For verbal originality, the LD experimental group's adjusted posttest mean was again significantly greater ($p < .001$) than the mean of the control groups.

Insert Table 1 about here

Discussion

The Purdue Creative Thinking Program was successful in stimulating the LD experimental group in written expression on the Torrance Tests of Creative Thinking (verbal booklet). The instructional approach utilized in this study to train language behavior differs from most approaches implemented in special education classrooms in that the activities were developed to train divergent thinking.

One limitation in this investigation is the lack of control for the Hawthorne effect. The investigation did not provide for the administration of an alternative instructional program to an additional control group. A recommendation for further research in this area would be to include measures to control for the possibility of the Hawthorne effect.

However, based on the significant results of the present investigation, programming such as employed in this study appears to be beneficial in stimulating the subjects creative writing skills. Therefore this learning strategy is worthy of further study.

Table 1 Analysis of Covariance (ANOVA)

for Creativity Variables

	LDE		LDC	
Variables	Adjusted $\bar{X}$	SD	Adjusted $\bar{X}$	SD
Written Verbal Fluency	30.69	17.75	22.33	10.76
Written Verbal Flexibility	20.79	7.13	15.01	8.88
Written Verbal Originality	32.69	25.66	24.51	11.49

LDE = Learning disabled experimental

LDC = Learning disabled control

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